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ABSTRACT

The Research and Development Interpretation Service (RDIS) and its activities as a regional support of the Research and Development Exchange (RDx) are described; both organizations are part of a federal effort to bring educational research and school practice closer together. Goals for RDx include interagency cooperation and dissemination of educational activities and resources, increased understanding and use of research and development outcomes, and increased shared understanding and application of information about practitioner needs and efforts to meet those needs. RDIS is designed to serve as a resource to RDx for analytical information on research and development in priority areas, to develop materials to enhance communication between the researchers and practitioners, to deliver relevant interpretative information, and to improve the quality of research and development interpretations. Key activities related to accomplishing these objectives are the identification, analysis, and dissemination of analytical and interpretative literature, e.g., two bibliographies on interpretative reports for teaching elementary reading and mathematics; the improvement of knowledge transformation and delivery to educators by doing research and development on the process, e.g., an experimental plan for alternate strategies for presenting interpretations; and a report on the evaluation of the NIE Education Product catalog. (Author/MBR)

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FINAL REPORT

RESEARCH AND DEVELOPMENT INTERPRETATION SERVICE

March 1, 1977-November 30, 1977

CEMREL, Inc.

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IR 006 360

The purpose of this report is to summarize the activities conducted by the Research and Development Interpretation Service (RDIS) pursuant to modification #2 of NIE 400-76-0140, a contract with the National Institute of Education.

The RDIS project is part of the Research and Development Exchange (RDx), an emerging federal effort to bring the worlds of educational research and school practice closer together. The RDx is operated by a consortium of regional educational laboratories and a university-based R&D center. The purpose of the RDx is reflected in its name: to create an exchange of information. Through the RDx, researchers and developers can communicate the results of their work to educational practitioners. Simultaneously, the practitioners use the RDx to relay information about their needs to researchers, developers, and policymakers. Thus the RDx encourages practitioners to influence future R&D policies and programs while it informs them about available R&D outcomes.

The RDx has three primary goals:

1. There are increasing numbers of organizations and personnel involved in carrying out dissemination activities aimed at improving educational practice. Therefore, a major goal of the RDx is: To develop with these organizations and personnel ways of coordinating dissemination activities and resources.

   - Share information about alternative dissemination strategies.

- Share human and material resources to strengthen the capacity of these organizations and personnel to carry out dissemination.

2. There are increasing numbers of R&D outcomes which can be used in efforts to improve educational practice. Therefore, a second major goal of the RDx is: To increase understanding and use of R&D outcomes by organizations and personnel who work with practitioners.

   - Provide consumer-oriented information that facilitates comparison of R&D outcomes to meet specific needs.
   - Provide assistance in the use of information about R&D outcomes.
   - Make R&D outcomes more accessible.

3. There are diverse organizations and personnel involved in the conduct of R&D to improve educational practice. Therefore, a third major goal of the RDx is: To increase shared understanding and application of information about practitioner needs and efforts to meet those needs.

   - Provide information about practitioners' needs and current activities to help the R&D community make decisions about the production and delivery of R&D outcomes.
   - Provide information about the dissemination and use of R&D outcomes.

- Help the R&D community explore the implications of information about practitioners' needs and apply this information to their work.

The core of the RDx is the network of five Regional Exchanges (Rx). The RDIS was created to support the Regional Exchanges in their work.

During recent decades a great deal of educational research and development has been conducted in university and institutional settings across the country. Although efforts have been made to disseminate the findings of these R&D activities, the materials that have been published have, to a large extent, not been in a form that has proven useful to practitioners.

On the other hand, there has been no concerted effort on the part of practitioners to alert the R&D community to their particular problems--problems which might be better understood or perhaps resolved through increased communication with researchers and developers.

If research and development efforts are to improve the quality of educational practice, then communication between researchers and practitioners must be strengthened. RDIS as part of the RDx has been designed to help create new communication channels between these two groups.

Goals of the RDIS are:

1. To serve as a resource to the Regional Exchanges for analytical and interpretive information on R&D in priority areas determined by the RDx.
2. To develop materials designed to enhance communication between the R&D community and practitioners.

3. To deliver the interpretive information developed by RDIS to relevant audiences through the Regional Exchanges, using various dissemination strategies and formats.
4. To improve the quality of R&D interpretations.

In order to accomplish these objectives key activities were identified and conducted. What follows is a summary of these activities and specific tasks related to them.

Task 1: Identify and analyze the existing analytical and interpretative literature in two identified priority areas--reading/language arts and mathematics.

The identification and analysis of existing analytical and interpretative literature is an essential first step in achieving the two project objectives--to serve as a resource to the Regional Exchanges and to improve the knowledge transformation process by subjecting it to an R&D process. As a resource, the collection of materials and the results of the analysis are distributed to the Regional Exchanges for their use. Since the materials are in topic areas they have identified as priorities, they will be able to draw upon them in serving their constituencies. The portfolios that result from the collection and analysis serve as the raw material for the design and implementation of alternative strategies in Tasks 3 and 4.

a. Appoint a consultant panel for each of the two priority topics; the panel will consist of expert representatives from the subject fields.

To identify the representatives from the subject field to serve on each consultant panel, we employed three techniques. First, the executive directors

of professional organizations (e.g., International Reading Association, National Council of Teachers of Mathematics Association, Association for Supervision and Curriculum Development, Phi Delta Kappa) and of the appropriate ERIC Clearinghouses were asked to recommend ten people who share a broad understanding of the research, the school practices, and the resolved and unresolved issues in each area. Second, telephone interviews were conducted with key researchers and sponsors of research recommended by the Resource and Referral Service. Again, each key researcher was asked to nominate ten subject matter experts. Finally, using print materials, the ten authors cited most frequently in the bibliographies were determined.

The math panel members were Robert E. Reys, Professor of Math Education, University of Missouri at Columbia; Marilyn Suydam, ERIC Information Analysis Center for Science, Math, and Environmental Education, Chio State University; and James W. Wilson, Professor, Department of Math Education, University of Georgia. The reading panel members were John Guthrie, Director of Research, International Reading Association; S. Jay Samuels, Director, Center for Research in Human Learning, University of Minnesota; Cleona Shortridge, Teacher, St. Louis Public School System; Harry Singer, Professor of Educational Psychology, School of Education, University of California/ Riverside; and Phyllis A. Weaver, Assistant Professor, Harvard Graduate School of Education.

b. Establish criteria for identifying and judging the merits of existing work.

Prior to meeting with the consultant panel, CEMREL staff developed a preliminary set of criteria for identifying and judging the merits of existing

work. The criteria included comprehensiveness, relevance, recency, accuracy in drawing conclusions and implications from primary sources, and grasp of the current and emerging issues in the field.

At the meeting of the consultant panel, the criteria for judging existing analytical and interpretive work were reviewed.

c. Collect existing analytical and interpretive work in two of the priority topic areas.

The search plan used two approaches for uncovering existing work. One approach was a search of print sources. We used the ERIC system, examined recent (past five years) books in the subject area, searched periodicals, publication lists of relevant professional associations, and publications documenting exemplary practices (e.g., Educational Programs That Work, IVD catalogs, IRA documents), and checked reports done by research organizations and state departments of education.

The second approach involved talking with the consultant panel and other experts identified by the Resource and Referral Service. They were contacted and asked to recommend what they considered to be the key analytical and interpretive documents and publications that noted exemplary practices in their topic area. As documents or practices were identified through print searches or by interview, a single copy or description was acquired. An annotated bibliography was prepared for each topic area.

d. Select, in conjunction with the consultant panel, the most useful existing products in the priority areas.

Panel members recommended the features to be included in the portfolio. Working from the annotated bibliographies which were prepared the panel members recommended the articles, books, and other interpretative products which they believed to be most useful.

e. Develop a file of knowledge transformation products in two of the priority areas.

Of special interest in the annotated bibliography were the knowledge transformation products. A list of those documents which attempted to summarize and interpret the existing R&D information was compiled and submitted.

f. Analyze gaps in existing work.

The gaps in existing work were analyzed in two ways. First, after surveying the collection of articles and products, the expert panel identified gaps in summarizing and interpreting the R&D base. Second, as the analytical section of the portfolio was submitted to the panel, they indicated additional questions seemingly unaddressed by the research.

Task 2: Disseminate information about existing analytical and interpretive information in the two priority areas.

To meet its objective of serving as a resource to the Regional Exchanges, the R&D Interpretations contractor made available the information gathered in the priority topic areas to the Exchanges. In addition, a substantive type magazine, including a regional insert was developed.

a. Distribute to the Regional Exchanges and NIE the portfolios and copies of the existing analytical and interpretive products recommended by the panel.

A portfolio was developed for each priority area. A portfolio contains the selected documents which the project staff and consultant panels believe would be most helpful to the Regional Exchanges in dealing with their clients. A list of the contents of the portfolio (see Appendix A and Appendix B) served as a guide for responses to inquiries to the regional exchanges. In cases where Exchanges did not have easy access to the items in the portfolio, they were supplied by the RDIS.

b. Produce, in cooperation with CEDaR as a subcontractor, a substantive type magazine titled Educational R&D Report to communicate R&D outcomes regularly to the education community.

The publication of the Educational R&D Report was begun. The R&D Report is a periodical designed to enable communication with a large but highly targeted audience about educational R&D. Also it will provide the Regional Exchange contractors with a means of communicating with the key personnel in their region. An introductory brochure was mailed to mailing lists maintained by existing contractors and the existing CEDaR mailing list of individuals desiring information about research and development. Return cards from this initial mailing were used to build the mailing list for the R&D Report. There were approximately 6,000 respondents. The first issue of the R&D Report was submitted to the Government Printing Office and will be mailed when printing is completed.

The R&D Report has two primary purposes. First, it communicates directly with a large but highly targeted audience about specific educational R&D outcomes. And, second, it provides the Regional Exchange contractors with a means of communicating with key personnel in their regions.

Feature-length articles were written by professional journalists. These articles describe exemplary products and practices identified by the Regional Exchanges, validated R&D products in use, and overviews of R&D outcomes in specific RDx priority areas, including topics emerging from the Regional Exchange needs assessments, thrusts of "national centers" sponsored by NIE, and topics chosen for special attention.

Task 3: Support/encourage/collaborate in the projections or revision of knowledge transformation products that inform decision making in two priority areas, reading and mathematics.

a. Develop a print product in the area of reading, pending NIE approval of a design.

The RDIS staff prepared interpretive reports in the areas of reading and math. However, the interpretive work of RDIS during the past year focused primarily on the development of a report in the area of reading. Nearly all previous attempts to summarize the reading research literature addressed the question, "What have reading researchers discovered?" A few went on to ask, "What are the implications of these discoveries for the practitioner?" The first step in constructing the RDIS document, however, was to interview teachers, reading specialists, and principals to discover questions they wanted answered. Reviews of the literature and interviews with leading

reading researchers were conducted. In addition, the advisory Consultant Panel of reading researchers and practitioners--all nominated by their peers in the educational community--met several times for periods of two to three days to discuss the questions and determine how the research might best answer them.

For many of the questions, research results simply were not clear. In the case of twenty-four questions, however, the research was able to lend guidance. No definitive answers existed for any of the questions addressed. An important result of the work on the reading document has been the realization by all parties--CEMREL, NIE, and the RDx--that the planning and execution of a new approach to analysis and interpretation of the research in reading is a creative, developmental process. Many researchers and practitioners reviewed the document. Although work on the document will continue through September 1978, and updating will be a continuing process after that, Research Within Reach: A Research-Guided Response to the Concerns of Reading Educators promises to be an innovative work highly responsive to the needs of practitioners. The length of time needed to produce the document is reflective of the extensive planning and care which went into its development and of the large numbers of researchers and practitioners who participated in the process.

b. Design an experimental strategy (e.g., a seminar or workshop) and alternative format(s) for delivering information to two categories of users in the priority area of reading.

The interpretive report in reading was tested in two settings. In the first, a workshop was presented for a group of teachers and feedback from

that activity was collected and summarized. In the second setting, the paper was delivered with only a brief introduction and explanation to a group of linking agents who had expressed an interest in the area of reading. In both cases, the comments received from these groups were integrated into the revision process. A paper (Appendix C) was also prepared which presented an experimental design for testing alternative delivery strategies for the reading report. In this paper, the problems of conducting such an experiment are discussed and a plan for testing two alternatives is presented.

c. Provide consultation and funds to appropriate current or planned knowledge transformation activities, e.g., NIE supported NW Reading Consortium development of a portfolio on reading and ERIC Clearinghouse on Reading and Communication Skills document on "Teaching Reading Comprehension."

Through a subcontract with the Northwest Reading Consortium, a report on the relationship of research in reading comprehension to ten validated R&D products in the Northwest Reading Consortium was produced. Also through a subcontract with the Human Interaction Research Institute, a paper titled Development of a Knowledge Base That Represents Current State of the Art In a Given Field was developed.

Task 4: Improve the production of knowledge transformations and their delivery to educators by doing R&D on the processes.

Since one of the objectives of the R&D Interpretation Service is to add to the knowledge base in order to improve R&D interpretations and delivery strategies in general, an important set of activities involves engaging in

R&D on the production and delivery of knowledge transformations. While the products resulting from the contract are developed for the Regional Exchanges, the procedures used to develop and deliver them must be designed and studied as a research process.

a. Report of implications drawn from the evaluation of the catalog and from users' reactions to transformation products as they help in the development of alternative designs for new transformation products.

In cooperation with the Regional Exchanges and the System Support Service an evaluation of the NIE catalog was conducted. The evaluation report draws implications for the future production of the catalog (see Appendix D).

b. A comparative analysis of various delivery approaches.

An analysis of various approaches for delivering interpretive information was also performed. The purpose of the work provides the government with a framework in which to examine the implications of deciding to support alternative approaches (see Appendix E).

c. Develop a list of knowledge transformation experts in reading and mathematics with their specific competencies.

In order to facilitate future knowledge transformation work in reading and mathematics, a list of specialists in these areas was developed.

APPENDIX A

A Portfolio of Resources for Linkers: The Teaching and Learning of Reading in Elementary Schools

A Portfolio of Resources for Linkers:

The Teaching and Learning of Reading in Elementary Schools

I. Annotated Bibliography

II. Major Interpretive Reports

A. Weaver, P. A., with Willis, H. D., & Shonkoff, F. Research within reach: A research-guided response to concerns of reading educators. CEMREL, Inc., 1977.

B. Carrillo, L. W. Teaching reading: A handbook. New York: St. Martin's Press, 1976.

C. Chall, Jeanne. Learning to read: The great debate. McGraw-Hill Book Co., 1967.

D. Resnick, L. B., & Weaver, P. A. (Eds.). Theory and practice of early reading. Hillsdale, NJ: Erlbaum, in press.

III. Other Interpretive Reports

A. Agin, A. P. An overview of recent research in reading. Elementary English, 1975, 52(3), 370-375.

B. Bond, G. L., & Dykstra, R. The cooperative research program in first-grade reading instruction. Reading Research Quarterly, 1967, 2, 5-142.

C. Danks, J. J., & Fears, R. Oral reading: Does it reflect decoding or comprehension? In L. B. Resnick & P. A. Weaver (Eds.), Theory and practice of early reading. Hillsdale, NJ: Erlbaum Associates, in press.

D. Goldbecker, S. S. Reading: Instructional approaches. Washington, DC: National Education Association, 1975, 33 pp.

E. Gow, Doris T. A synthesis of research in basic skills. Pittsburgh: Learning Research and Development Center. (Pennsylvania School Improvement Program)

F. Guthrie, J. (Ed.). Aspects of reading acquisition. Baltimore, MD: Johns Hopkins University Press, 1976.

G. Leeds, Donald S. Sociology of reading: Social and cultural factors. Reading World, May 1974.

H. Rupley, William H. Reading readiness research: Implications for instructional practices. The Reading Teacher, January 1977.

I. Spiro, R. J., Bruce, B. C., & Brewer, W. F. (Eds.). Theoretical issues in reading comprehension. Hillsdale, NJ: Erlbaum Assoc., in press.

IV. Program and Product Consumer Information

A. EPIE
   1. Analyses of Basic and Supplementary Reading Materials
   2. Selectors' Guide for Elementary School Language Arts Programs

B. Reading and Language Arts: Products from NIE, National Institute of Education, U. S. Department of Health, Education, and Welfare, Summer 1977.

C. Educational Programs that Work, United States Office of Education, 1976. Available from Far West Laboratory for Educational Research and Development, 1855 Folsom Street, San Francisco, California 94103.

D. Analysis and Selection Kits from the Project Information Packages United States Office of Education.

APPENDIX B

A Portfolio of Resources for Linkers: The Teaching and Learning of Mathematics in Elementary Schools

A Portfolio of Resources for Linkers:

The Teaching and Learning of Mathematics in Elementary Schools

I. Annotated Bibliography

II. Major Interpretive Reports

A. Callahan, L. G., & Glennon, V. J. Elementary school mathematics: A guide to current research. Washington, DC: Association for Supervision and Curriculum Development, 1975.

B. Suydam, M. N., & Weaver, J. F. Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC SMEEC)

III. Other Interpretive Reports

A. Aiken, L. R., Jr. Language factors in learning mathematics. Columbus, OH: ERIC Information Analysis Center for Science, Mathematics, and Environmental Education, 1972. (ERIC Document Reproduction Service No. ED 068 340)

B. Beilin, H. The training and acquisition of logical operations. In M. F. Rosskopf, L. P. Steffe, & S. Taback (Eds.), Piagetian cognitive-development research and mathematical education. Reston, VA: National Council of Teachers of Mathematics, 1971.

C. Bell, M., Esty, E., Payne, J. N., & Suydam, M. Hand-held calculators: Past, present, and future. In F. J. Crosswhite & R. E. Reys (Eds.), Organizing for mathematics instruction (1977 Yearbook). Reston, VA: National Council of Teachers of Mathematics, 1977.

D. Crosswhite, F. J., & Reys, R. E. (Eds.). Organizing for mathematics instruction (1977 Yearbook). Reston, VA: National Council of Teachers of Mathematics, 265 pp.

E. Junge, C. W., Campbell, P., & Denmark, T. Mathematics for young children: A summary of research and related literature. Tallahassee, FL: Florida State Department of Education, Early Childhood and Elementary Education Section, 1975. (ERIC Document Reproduction Service No. ED 120026)

F. Miller, R. L. Individualized instruction in mathematics: A review of research. Mathematics Teacher, 1972, 69, 345-351.

G. Moran, T. P. Significant developments in the use of computers in school mathematics: A sourcebook for administrators, teachers, and teacher educators (Doctoral dissertation, Columbia University, 1974). Dissertation Abstracts International. (University Microfilms No. 74-23,523)

H. National Council of Teachers of Mathematics. The slow learner (Thirty-fifth Yearbook). Reston, VA: National Council of Teachers of Mathematics, 1972, 528 pp.

I. National Institute of Education. The NIE Conference on basic mathematical skills and learning, Volume I: Contributed position papers and Volume II: Working group reports. Euclid, OH: U. S. Department of Health, Education, and Welfare, 1975.

J. Rosskopf, M. F., Steffe, L. P., & Taback, S. (Eds.). Piagetian cognitive-development research and mathematics education. Reston, VA: National Council of Teachers of Mathematics, 1971, 243 pp.

K. Schoen, H. L. Implications of research for instruction in self-paced mathematics classrooms. In F. J. Crosswhite & R. E. Reys, (Eds.), Organizing for mathematics instruction (1977 Yearbook). Reston, VA: National Council of Teachers of Mathematics, 1977.

L. Schoen, H. L. Self-paced mathematics instruction: How effective has it been? The Arithmetic Teacher, 1976, 23, 90-96.

M. Schoen, H. L., & Drapac, G. L. An annotated bibliography of research on self-paced mathematics instruction (1965-1976). Iowa City, IA: 1976. (ERIC Document Reproduction Service No. ED 128204)

N. Steffe, L. (Ed.). Research on mathematical thinking of young children: Six empirical studies. Reston, VA: National Council of Teachers of Mathematics, 1975, 208.

O. Suydam, M. N. Teaching mathematics to disadvantaged pupils: A summary of research. Columbus, OH: ERIC Information Analysis Center for Science and Mathematics Education, 1971. (ERIC Document Reproduction Service No. ED 049 934)

P. Suydam, M. N., & Higgins, J. L. Activity-based learning in elementary school mathematics: Recommendations for research. Columbus, OH: The Ohio State University, 1977. (Will be available from the ERIC Document Reproduction Service)

Q. Suydam, M. N., & Weaver, J. F. Addition and subtraction with whole numbers, Set B. In Using research: A key to elementary school mathematics. St. Paul, MN: Saint Catherine College, 1970. (ERIC Document Reproduction Service No. ED 037 348)

R. Suydam, M. N., & Weaver, J. F. Overview...Verbal problem solving, Set B. In Using research: A key to elementary school mathematics. University Park, PA: Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 047 932)

S. Suydam, M. N., & Weaver, J. F. Overview...Other mathematical topics, Set B. In Using research: A key to elementary school mathematics. University Park, PA: Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 047 931)

T. Suydam, M. N. Interpretive study of research and development in elementary school mathematics: Phase 2, Final Report. University Park, PA: Pennsylvania State University, August 1970. (ERIC Document Reproduction Service No. ED 043508)

U. Suydam, M. N., & Weaver, J. F. Instructional materials and media, Set A. In Using research: A key to elementary school mathematics/ University Park, PA: Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 040 055)

V. Suydam, M. N., & Weaver, J. F. Multiplication and division with whole numbers, Set B. In Using research: A key to elementary school mathematics. University Park, PA: Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 038 291)

W. Suydam, M. N., & Weaver, J. F. Planning for instruction, Set A. In Using research: A key to elementary school mathematics. University Park, PA: Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 038 290)

X. Suydam, M. N., & Weaver, J. F. Attitudes and interests, Set A. In Using research: A key to elementary school mathematics. University Park, PA: Pennsylvania State University, 1970. (ERIC Document Reproduction Service No. ED 038 283)

Y. Suydam, M. N., & Weaver, J. F. Mathematics and the "disadvantaged." In Using research: A key to elementary school mathematics. Columbus, OH: ERIC Information Analysis Center for Science Education, 1971. (ERIC Document Reproduction Service No. ED 051 001)

Z. Suydam, M. N., & Weaver, J. F. Verbal problem solving. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

AA. Suydam, M. N., & Weaver, J. F. Geometry and other mathematical topics. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

BB. Suydam, M. N., & Weaver, J. F. Rational numbers: Fractions and decimals. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

CC. Suydam, M. N., & Weaver, J. F. Multiplication and division with whole numbers. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

DD. Suydam, M. N., & Weaver, J. F. Addition and subtraction with whole numbers. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

EE. Suydam, M. N., & Weaver, J. F. Instructional materials and media. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

FF. Suydam, M. N., & Weaver, J. F. Differentiating instruction. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

GG. Suydam, M. N., & Weaver, J. F. Promoting effective instruction. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

HH. Suydam, M. N., & Weaver, J. F. Organizing for instruction. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

II. Suydam, M. N., & Weaver, J. F. Attitudes and interests. In Using research: A key to elementary school mathematics (Rev. Ed.). Columbus, OH: The Ohio State University, 1975. (ERIC Science, Mathematics, and Environmental Education Clearinghouse No. 238M)

JJ. Suydam, M. N., & Dessart, D. J. Classroom ideas from research on computational skills. Reston, VA: The National Council of Teachers of Mathematics, Inc., 1976, 64 pp.

KK. Van Engen, H. Epistemology, research, and instruction. In M. F. Rosskopf, L. P. Steffe, & S. Taback (Eds.), Piagetian cognitive-development research and mathematical education. Reston, VA: National Council of Teachers of Mathematics, 1971.

LL. Weaver, J. F., & Suydam, M. N. Meaningful instruction in mathematics. Columbus, OH: ERIC Information Analysis Center for Science, Mathematics, and Environmental Education, 1972. (ERIC Document Reproduction Service No. ED 068 329)

IV. Program and Product Consumer Information

A. EPIE, Selectors' Guide for Elementary School Mathematics

B. Catalog of NIE Education Products, Vol. I, Basic Skills Chapter, Mathematics and Science, p. 145-249.

C. Educational Programs that Work, United States Office of Education, 1976. Available from Far West Laboratory for Educational Research and Development, 1855 Folsom Street, San Francisco, California 94103.

APPENDIX C

An Experimental Plan to Study Alternate Strategies For Presenting Interpretations of Educational Research and Development

AN EXPERIMENTAL PLAN TO STUDY ALTERNATE STRATEGIES FOR PRESENTING INTERPRETATIONS OF EDUCATIONAL RESEARCH AND DEVELOPMENT

Prepared for

The Research and Development Interpretation Service

of the

Research and Development Exchange System

By

Edwin C. Myers

CEMREL, Inc.

February 1978

The work is being performed pursuant to a grant with the National Institute of Education of the U.S. Department of Health, Education, and Welfare.

Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent or imply any official policy or interest of the National Institute of Education position or policy.

This plan is suggested as a way to increase understanding of the process of presenting interpretations of research and development findings to those who are expected to put these findings to use in schools. The Research and Development Interpretation Service (RDIS) project attempts to prepare interpretive reports on various topics and to design alternative presentations of these reports for various audiences. The R&D area selected for this proposed study is one of the priority areas for the Research and Development Exchange (RDX): "The Teaching and Learning of Reading in Elementary Schools."

Preparing alternative forms of R&D interpretations is a relatively new area where little if any direct "experimental" work has been done. Therefore, this plan is as much concerned with developing a framework for future experimentation as it is with testing one or more specific approaches to presenting information about the teaching of reading to reading educators.

As we began our interpretive work, the problem of presentation and its solution seemed straightforward. We needed to develop a core set of "facts and opinions" (i.e., the interpretation) which responded to the questions of all those people concerned with the teaching and learning of reading in elementary schools. We could then customize this core work for various audiences. With this procedure the probability of the information being used would be increased.

However, operationalizing this conceptual solution has not been straightforward. Many new problems were raised. This paper will attempt to expose many of the issues imbedded in the presentation of interpretive work, in a manner which can guide initial experiments to explore alternative forms of presentation.

The plan will address three sets of questions: (1) those concerning the audience for the interpretations (i.e., populations and subjects), (2) those concerning the message, including its content and presentation (i.e., independent variables), and (3) those concerning the measurement and analysis of the effect of the message (i.e., dependent variables).

Audiences

Our initial audience groups were identified as we attempted to collect various types of questions about the teaching of reading to guide our interpretive work. For this purpose we selected individuals from categories linked to their job descriptions, i.e., regular classroom teachers, reading specialists and supervisors, principals, etc.

While these categories seemed satisfactory at first, it soon became apparent that there was not a strong relationship between the job a person had and the information s/he seemed to want or need. For example, even though a question was asked more frequently by administrators than teachers, the question was, indeed, asked by some teachers.

Findings such as this stimulated a fuller consideration of the possible dimensions which could be used to divide the total audience of "all people interested in the teaching of reading" into groups for which targeted presentations might be more helpful. Several of the more promising dimensions might be:

- Job title, job description, or role
- Type of school/district
- Type of questions asked
- Current knowledge about the teaching of reading
- Preference for mode of presentation
- Scales such as the "Stages of Concern" or the "Level of Use" developed by G. E. Hall and his associates at the Research and Development Center for Teacher Education. For example, people who are ready to make changes in their schools might get different material than those who are simply exploring a problem area.

Since the presentations are being developed for use by the Regional Exchange (RX) contractors, their staffs may provide the most valuable information about audience groups. A survey of the RX contractors would be an important part of the plan.

The purpose of the first series of studies is, therefore, intended to provide a basis for identifying target groups for alternative presentations. Once these groups have been identified, they will be used to define populations from which samples can be drawn for two purposes. The first will be to provide the groups to be used to compare effects of various kinds of presentations, and the second will be to identify individuals who can pose additional questions for interpretive work.

Several problems with this approach to identifying populations should be pointed out. First, the identification of groups empirically could become complicated and difficult to interpret since their response to a presentation might be predicted by more than one dimension. Second, the grouping procedure should produce very homogeneous groups with respect to the effect of a presentation. This is because we suspect that dissemination specialists will be more concerned with insuring that <u>every</u> participant in <u>their</u> audience be favorably affected rather than with increasing the mean effect a significant amount. Third, the grouping procedure must be no more complicated or expensive operationally than its benefits warrant.

<u>Key Tasks</u>

A-1. Review literature relative to possible consequences of grouping target audiences by the dimensions listed above.

A-2. Collect and/or develop instruments for measuring the dimensions selected.

A-3. Administer instruments.

A-4. Analyze the data to eliminate some highly related (overlapping) dimensions and to develop a set of target groups which may be expected to respond differentially to tailored presentations.

Developing Presentations

Once a number of target audiences have been identified, the core interpretive report must be tailored for each of them. Several types of changes could be made in the basic report. First, a selection of the "facts" to be presented

could be made. That is, information presented to one audience might not be presented to another. The selection could be made based on data or guesses about the information requirements of the audiences. Second, the context of the messages might be different. Examples and illustrations might be changed to fit more closely the experiences of the members of a particular audience. Third, the style could be changed. Vocabulary, sentence structure, tone, and organization of material could vary. Fourth, the mode of presentation could vary. For example, printed materials could be given to one audience and a film to another. Fifth, the packaging of the presentation could be altered. Packaging changes could include not only changes in the cover, title, or box but also in the promotional materials for the presentation.

Testing even two or three levels of just these five dimensions would require a very large experiment. Moreover, additional levels and dimensions could easily be identified. Choices among the possible treatments have to be made so that an experiment of a reasonable size can be conducted. To guide these choices, a framework which exposes the ways in which the presentation can be varied and the relationship among the dimensions should be developed. Selection of variables relative to populations can then be made and specific presentations designed.

Key Tasks

B-1. Develop a framework containing the dimensions of a presentation which can be varied to meet the projected requirements of various groups (see also audiences).

B-2. Select the levels of each dimension to be used for each presentation.

B-3. Design the presentations.

Effects

The most difficult and persistent problem for those preparing interpretive works involves the specification of the intended effect of the reports or presentations. Certainly the designers of the RDX project were hopeful that these reports would somehow help improve education or increase student

achievement. However, it was also clear that attempts to measure the effects of the RDX (not to mention the RDIS) on student performance would be fruitless. While this may seem a curious state of affairs, the apparent contradiction seems based on the assumption that student achievement is determined by the interaction of a large and complex set of variables. Therefore any one variable (i.e., RDX) would account for an indetectably small proportion of the variance in student performance.

Concerning the effects of the RDIS interpretive reports, we must also ask if we are attempting to directly influence the performance of teachers in the classroom. Historically, education at all levels has acknowledged implicitly a distinction between instruction designed to improve a person's ability to talk and write about a topic and his/her ability to perform "practical" tasks related to that topic. Providing "lecture" and "laboratory" courses might be the most common example of this distinction. It is important to note that each type of course is important in its own right. A skillful medical practitioner who cannot adequately communicate her/his work is unable to fully contribute to or benefit from the knowledge of others. On the other hand, one may not want to select a physician solely on his/her ability to articulate principles of medical research.

We argue that the presentation of the RDIS interpretive report is intended primarily to improve the ability of its audiences to talk and write about the teaching and learning of reading. The extent to which an improvement in these skills might contribute in the future to either classroom practice or student achievement is difficult to predict. The presentations will not be designed to directly affect teachers' classroom activities or pupil performance.

Two major factors compel this course of action. The first concerns what is possible within the RDIS project. Designing presentations which could even hope to alter teacher and student performance would constitute a development project requiring resources clearly outside the scope of this project. Second, the goal of the project is to interpret research in reading. By its nature, research does not speak directly to practice. Rather it

illuminates the relationships among variables. (An excellent discussion of this issue is presented by Fred N. Kerlinger in his 1977 AERA Presidential Address.) RDIS interpretations of research are thus intended to help audiences better understand the research finding about these relationships. Kerlinger argues that it is quite likely that increased understanding of underlying phenomena will some day affect educational practice. The fallacy lies in attempting to predict in advance "how" and "when."

Measures of Knowledge

The first studies of the effects of each presentation will measure changes in the speaking and writing of the audience members. To this end instruments will be developed and administered. These instruments will likely resemble traditional achievement tests.

Measures of Concern

In addition to changing the ability of audience members to speak and write about research fundings, the presentations are also intended to increase their concern for and interest in the problem. We would like to create realistic perceptions of the value of research and the ability of researchers to help practitioners. Questionnaires and/or interview schedules would be developed to assess these dimensions.

Measures of Implementation

The first two sets of measures (knowledge and concern) would be developed on the assumption that an audience member receives the presentations (i.e., the treatment is implemented). While it is likely that for experimental purposes we will have a "captive" audience for the presentation, this will not be the case for other audiences in the future. Typically the book, film, workshop, etc., will be available for those who request it. Perhaps some sort of promotional activities will also be conducted. Therefore, part of this experimentation should address factors in the presentation or its promotion which may increase the probability that the treatment will be implemented. Two types of data collection are proposed following the design of a fairly traditional marketing survey. First, requests for alternative presentations will be counted and compared. Second, a follow-up interview with people

who had requested the presentation will be conducted to determine their utilization of it.

Tracing Other Possible Effects

While the experimental part of this proposed study is limited to measuring direct effects on the behavior of the audiences, there remain questions of how these changes, if they occur, might be related to events which occur in districts, schools, and classrooms. As argued earlier, while it is not the goal of a research project to directly improve practice, it is possible that in some indirect way, people who understand research findings might conduct their practice of education in different ways. This final line of investigation will attempt to explore for some of these more distant effects. Perhaps in this way some clues to the improvement of practice can be discovered. This work will consist of a limited number of follow-up interviews with audience members to attempt to discover any additional ways in which the presentation of research interpretations may have affected them or their work.

A Critical Experiment

So far this plan has acknowledged the assumption that alternative presentations of R&D interpretations will differentially affect various audiences. In spite of the face validity of that assumption, it would be less than completely responsible to design and conduct a series of possibly expensive studies to explore those variables before we know there is any effect of consequence. Preparing alternative presentations of interpretive reports will be expensive. Before launching into substantial development, we suggest that the first experiment involve two or three audience groups with the two presentations judged most likely to produce differential effects. These two presentations would also be contrasted with the core interpretive report as a control or benchmark treatment. The results of this experiment would be examined first to determine if there was a statistically significant effect and second to evaluate the magnitude of that effect and the cost of producing it. In other words, this first experiment will help determine the value of continuing this line of investigation.

Key Tasks

C1. Review literature related to alternative presentations.

C-2. Select and/or develop instruments for measuring each of the variables described above.

C-3. Administer the alternative presentations developed in Task B-4 to the audience groups selected from the set identified in Task A-4.

C-4. Administer the instruments developed in Task C-2.

C-5. Analyze and interpret that data collected and prepare a report.

C-6. Conduct follow-up interviews and prepare report.

APPENDIX D

Report on the Evaluation of the

Catalog of NIE Education Products

REPORT ON THE EVALUATION OF THE *Catalog of NIE Education Products*

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Report on the Evaluation of the *Catalog of NIE Education Products*

At the Midwest Regional Exchange Planning Conference held in May 1977, a subcommittee consisting of representatives of the National Institute of Education (NIE), the Research & Development Interpretation Service (RDIS), and the Systems Support Service (SSS) considered possibilities for evaluating the *Catalog* and then agreed to an evaluation plan consisting of three activities:

1. Questions concerning use and organization of the *Catalog* would be included as part of the baseline data collection activities of the Regional Exchanges.
2. The *Catalog* would be compared to similar compilations offering product/program information.
3. A post-card questionnaire would be placed in remaining issues of the *Catalog* and in a third volume (if developed).

This report presents the progress made on each of the evaluation activities.

Catalog Evaluation as Part of Baseline Data Collection

Eight questions concerning the *Catalog* were developed to be included as part of the baseline data collection. The questions (Attachment A), developed by the SSS staff, were distilled from a longer questionnaire (Attachment B), developed by the RDIS staff, with suggestions from the SSS.

The questions concerning the *CataLog* evaluation were presented by the SSS as models or suggestions to the Regional Exchanges. Because each exchange was free to use the questions, to adapt them, or not to use them at all, the information collected by the exchanges cannot be neatly summarized in terms of the suggested questions. However, since all exchanges reporting baseline data did address issues of *CataLog* use, impact, and suggested improvements, those categories can be used to summarize the reports made by the exchanges (Table 1).

TABLE 1

Evaluation of *NIE Catalog*
Based on Reports of Regional Exchanges

Rx/States	Uses	Impact	Suggested Improvements
Appalachia Educational Laboratory Rx	. General references . Inservice text . Identify products for future adoption . Writing proposals	. Products adopted	(80% of sample responding (N = 58) had no suggestions for improvement) . Annual revisions . Identifying programs/ materials with dissemination capabilities . More detailed information on intended target population . More detailed information on where product has been used . Provide descriptors/ make entries compatible with ERIC
Midwest Regional Exchange			
. Illinois		. Little evidence indicating extensive use	
. Indiana		. No information available	
. Iowa			. Improve entry format/ difficult to follow . Reduce the size
. Kansas		. Personnel in linkage component report the *Catalogs* "were rarely seen in the schools."	. Include information on availability earlier in format. "Some persons had become excited about the materials only to learn they were not available" . Provide descriptors/ make compatible with ERIC
. Kentucky		. No information available	
. Michigan		. Little evidence indicating extensive use	
. Minnesota		. Little evidence indicating extensive use	

TABLE 1, cont.

Evaluation of *NIE Catalog*
Based on Reports of Regional Exchanges

Rx/States	Uses	Impact	Suggested Improvements
Midwest Regional Exchange, cont.			
. Missouri	. NDN staff uses to help clients find suitable and available programs (if NDN or IVD channels yielded little).		. Make format like *Educational Programs that Work* . Make descriptors ERIC compatible
. Nebraska		. "Little feedback received."	
. Ohio		. "Little evidence indicating extensive use of this product."	
. Wisconsin		. "Little evidence indicating extensive use of this product."	
Northwest Rx (No information available)			
Research for Better Schools RX			
. Delaware	. General awareness . Resource to identify products or programs that could be of use	. None noted	. Information not as current as could be . Make descriptors ERIC compatible
. Maryland	. Resources for workshops . General reference . Information on curriculum development	. Inquiries to state media center on products listed in catalog indicates use by LEA's.	. Make descriptors ERIC compatible
. Pennsylvania	. General awareness . Identify products or programs that could be of use		. Accurate availability information (RISE staff feels as much as 40% of availability information is inaccurate). . Make it "machine searchable." . List contact people's names with entries . More durable findings needed

TABLE 1, cont.

Evaluation of *NIE Catalog*
Based on Reports of Regional Exchanges

Rx/States	Uses	Impact	Suggested Improvements
Southwest Educational Development Laboratory Rx	. Determine "state-of-the-art" in subject areas . Obtain information on new products/ programs	. None noted	. Keep updated—too many deadends . Put in loose-leaf form . Broaden coverage to include "qualified research" done in school districts . Include alphabetical listing . Detailed subject listing . Use color-coding . Make it more accessible to practitioners

Several tentative conclusions regarding the *Catalog* may be inferred from the exchange reports:

1. The *Catalog* is being used for:
   a. "General reference" purposes; and
   b. Locating information that is then passed on to others.
2. The impact of the *Catalog* appears to be minimal. While there are scattered reports of inquiries about products listed in the *Catalog*, the overall impression is one of little evidence of extensive use.
3. There is some indication that users are satisfied with the *Catalog* as it is. When asked to suggest improvements, the following points were mentioned frequently:
   a. Information about product availability should be current, complete, and prominently displayed.
   b. Improve the format of entries to include key-word descriptors.
   c. Make entries "ERIC compatible."

Comparison of the *Catalog* with Similar Compilations

To date, there is no information available on how the *Catalog* is received by school people who have no administrative responsibilities. This is an important audience since over half of the entries concern products dealing with "school subjects."

Similarly, there is no information available on what the *Catalog*'s strengths and weaknesses are when compared with other types of compilations of educational products.

To look at both these issues, RDIS contacted a guidance counselor in a suburban St. Louis school district and asked that she distribute copies of the *NIE Catalog* and a selected EPIE product to district teachers and guidance counselors with whom she was acquainted (N=9). Teachers and counselors were told they could keep the materials in exchange for "looking them over" and then talking by telephone to an RDIS staff member. The EPIE product, coupled with the *Catalog*, was related to each respondent's field of interest. For example, a guidance counselor received the *EPIE Career Education S*E*T** with his/her *Catalog*.

In addition to distributing the materials, the guidance counselor contacted by RDIS also agreed to carefully note any spontaneous (unsolicited) comments made about the materials to her.

In the telephone interview, teachers and counselors were asked to respond to the following questions:

1. When you got the *Catalog*, what did you look at first? Why?
2. Did you need to refer to the introduction to make sense out of the information presented in the *Catalog*?
3. Typically, when you read an entry in the *Catalog*, what sections did you pay most attention to? Which did you tend to skip over?
4. What are the strengths of the *Catalog* when compared with the EPIE product you received?
5. What are the weaknesses of the *Catalog* when compared with the EPIE product?

Question #1 was designed to examine the issue of "big book" vs. "little books." If most respondents quickly tried to find "their" sections, probably a series of mini-catalogs, much like *Reading & Language Arts: Products from NIE* would be a better method of packaging.

Question #2 dealt with clarity of format. If readers could understand what was being communicated by a product entry without having to read a how-to-use-it introduction, the presentation format is probably sufficiently clear.

Question #3 dealt with order or information presentation and the perceived relevance of the information presented.

Questions #4 and #5 were intended to solicit open-ended responses comparing *Catalog* features with EPIE product features.

Results

The small sample of convenience used here has produced some interesting suggestions for revising the *Catalog*. As a way of summarizing the information gathered for school people, a composite answer has been written for each question. The composite answer attempts to reflect the replies given by all of the people interviewed. Following the composite answer are implications for *Catalog* revision.

Q1. When you got the *Catalog*, what did you look at first? Why?

A. The index, the table of contents, and the section dividers, and the section designations printed on each page were the

Catalog entry points. Reasons for those choices were, "I wanted to get an overview," and "I wanted to find the section that interested me most."

Implications: In revising the *Catalog*, give careful attention to *Catalog* entry points. Continue to make it possible for the user to rapidly get an overview of the contents without needing to read a "How to use it" section.

Q2. Did you need to refer to the introduction to make sense out of the information presented in the *Catalog*?

A. Overwhelmingly, the answer was no. The entries, as they now stand are self-explanatory. Reviewers felt they could open the *Catalog* anywhere and understand the material being presented: The introduction in Volume 1 either was not read or read last "to see whether there were some things I had overlooked or should know about."

Implication: The format of the entries is sufficiently clear and self-explanatory. No changes are needed.

Q3. Typically, when you read an entry, which sections did you pay most attention to? Which sections did you tend to skip over?

A. The title and the italicized description were read first. Then if reader wished to know more, he or she would look at the narrative description. From there, sections on Subject Area, intended users, goals, implementation procedures, and

Develop/Author; Availability were read. Overlooked by nearly everyone were the Assessment Provisions and the assurances and claims. Assurances and claims was considered "not specific enough" and lacking credibility.

Implications: The presentation of information within entries need not be reorganized. A recommendation was made that implementation procedures be given more prominence if staff or equipment requirements were extraordinary. In revising the Assurances and Claims section, attention should be given to including evidence collected by parties not associated with the developer.

Q4. What are the strengths of the *Catalog* when compared with the EPIE product you received?

A. The strength of the *Catalog* when compared with the EPIE product was ease of use and the diversity of the *Catalog*.

Implications: Careful consideration should be given to abandoning the *Catalog* in favor of producing small, subject-defined booklets. One reviewer felt the *Catalog* was "big, but of necessity." Another thought it wouldn't be as useful if it were divided up piecemeal:

> "Although my major interest is in career education, I'm an educator, and I know that areas in education interact with one another. So I like having other areas right there in one place where I can get at them if I need them."

One reader said,

> "Separate *Catalogs* focused by subject matter areas might be handier, but the sheer size of the two volumes tells me a lot about the vigor of educational research that I would have missed had I reviewed only a little book."

Q5. What are the weaknesses of the *Catalog* when compared with the EPIE product?

A. The major weakness was the currency of the information. One reviewer felt "turned off completely" by the 1975 date: " I feel the *Catalog* is verging on obsolescence.

Implications: Some provision must be made for frequent revisions.

Post-card Questionnaire

NIE staff was to have responsibility for designing a post-card questionnaire to be inserted in remaining and future *Catalogs*. RDIS has no information on the progress of this component of the *Catalog* evaluation.

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ATTACHMENT A

Suggested Questions Concerning *CataLog* for

Use in Baseline Data Collection

Suggested Questions Concerning *Catalog* for Use in Baseline Data Collection

1. Are there persons in the SEA, ISA's or LEA's in the state who have received copies of the *NIE Catalog*?

2. Did they distribute the *Catalog*? To whom?

3. How did they learn about the *Catalog*, e.g., from Rx, in a newsletter, etc.?

4. What types of people do they know of personally who have used the *Catalog*, e.g., school superintendents, curriculum coordinators, principals, etc.

5. For what reason did these individuals use the *Catalog*, e.g., to identify products for possible adoption, general reference, or inservice text?

6. Does the respondent personally know of any results occurring due to these uses of the *Catalog*, e.g., requests for further information about a product, adoption of a product, etc.?

7. Do they have any suggestions for how the *Catalog* might be improved, e.g., other indexes, changes in format, other informational elements in the product description?

8. Would they like the information computerized in an ERIC-compatible format?

ATTACHMENT B

Survey on Use and Organization of the

Catalog of NIE Education Products

Survey on Use and Organization of the

Catalog on NIE Education Products

1. What is your position? (check the one that occupies most of your time)

_____ teacher

_____ administrator

_____ librarian

_____ community representative

_____ researcher

_____ counselor

_____ information/dissemination specialist

_____ other (please specify) _____

2. Where are you employed?

_____ federal agency

_____ elementary school

_____ secondary school

_____ college

_____ school district

_____ ISA

_____ state department

_____ publishing company

_____ other (please specify) _____

How long have you had your Catalog?

_____ less than one month

_____ one to three months

_____ three to six months

_____ longer than six months

4. Which of the following describes how you <u>first</u> heard of the NIE Catalog? (check one)

_____ It was given to me by the National Institute of Education.

_____ I saw it in a library (or other resource center).

_____ An information/dissemination specialist showed me a copy.

_____ A colleague told me about it.

_____ I heard about it at a professional meeting or workshop.

_____ I read about it in "Selected List of Government Publications".

_____ I received a promotional brochure describing the catalog.

_____ I read about it in a magazine or journal (please specify which one).

_____

_____ other (please specify) _____

What prompted you to get a copy of the NIE catalog? (check as many as apply)

_____ No reason, a copy was given to me.

_____ I needed it. (please specify why) _____

_____

_____ other (please specify) _____

What sources of information about R&D products did you use before the catalog was available? (please check as many as apply)

_____ didn't use any

_____ ALERT

_____ CEDaR catalogs

_____ publication lists from labs and centers

_____ EPIE reports

_____ newsletters or reports published by state departments of education

_____ newsletters or reports published by an intermediate service unit

_____ other (please specify) _____

To your knowledge, what was the very <u>first use</u> made of your copy of the NIE Catalog?

_____ It was used to obtain specific information for my own use.

_____ It was used to obtain specific information for others.

_____ Nothing specific, it was obtained just as a general reference.

_____ It has not been used.

_____ Other (please specify)._____

Since receiving the catalog, how frequently have you used it in the ways listed below?

		Never	Seldom (1-2times)	Occasionally (3-4 times)	Frequently (5 or more)
a.	to identify products for possible adoption	☐	☐	☐	☐
b.	to prepare presentations for workshops or training sessions	☐	☐	☐	☐
c.	to compare the products in the catalog with others I knew about	☐	☐	☐	☐
d.	to prepare a report for a class or seminar	☐	☐	☐	☐
e.	to recommend a product for someone's consideration	☐	☐	☐	☐

Shown on the chart below are the uses of the NIE Catalog given in Question 3. To the best of your knowledge, please indicate who besides yourself has used the catalog in the stated way and how frequently it has been used in that way.

Please use these code numbers for the users of the catalog column.

01 elementary teachers
02 secondary teachers
03 college teachers
04 special education teachers
05 school building administrators
06 district level administrators
07 state level administrators
08 federal level administrators
09 librarians
10 community representatives
11 students
12 information/dissemination specialists
13 guidance counselors
14 researchers
15 publishing staff
16 other (please specify)

_____

USES OF THE CATALOG	USERS OF THE CATALOG	FREQUENCY OF USE		
		SELDOM (1-2times)	OCCASIONALLY (3-4 times)	FREQUENTLY (5 or more)
a. to identify products for possible adoption	___ ___ ___	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
b. to prepare presentations for workshops or training sessions	___ ___ ___	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
c. to compare the products in the catalog with others I know about.	___ ___ ___	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
d. to prepare a report for a class or seminar	___ ___ ___	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
e. to recommend a product for someone's consideration	___ ___ ___	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐

To the best of your knowledge, what has happened as a result of the uses you and others have made of the catalog? (check as many as apply)

_____ nothing has happened

_____ further information about a product listed in the Catalog has been requested from the developer. (which product(s)?)

_____

_____ a product listed has been ordered for examination. (which product(s)?)

_____

_____ a product listed in the Catalog has been adopted. (which product(s)?)

_____

How useful do you find each of the following features of the NIE Catalog? (You may want to refer to the catalog before making your judgments.)

	Extremely Useful To Have	Useful To Have	Might Possibly be of Use	Of Doubtful Use	Not of Use at All
a. overview of subject areas	☐	☐	☐	☐	☐
b. narrative summaries	☐	☐	☐	☐	☐
c. sample lessons	☐	☐	☐	☐	☐
d. subject area(s)	☐	☐	☐	☐	☐
e. intended users and beneficiaries	☐	☐	☐	☐	☐
f. goals or purposes	☐	☐	☐	☐	☐
g. patterns of use	☐	☐	☐	☐	☐
h. assessment provisions	☐	☐	☐	☐	☐
i. time requirements	☐	☐	☐	☐	☐
j. implementation procedures	☐	☐	☐	☐	☐
k. materials and equipment	☐	☐	☐	☐	☐

	Extremely Useful To Have	Useful To Have	Might Possibly be of Use	Of Doubtful Use	Not Use Al
l. assurances and claims	☐	☐	☐	☐	☐
m. developer/author	☐	☐	☐	☐	☐
n. availability	☐	☐	☐	☐	☐
o. photo of product	☐	☐	☐	☐	☐
p. subject index	☐	☐	☐	☐	☐
q. user index	☐	☐	☐	☐	☐
r. developer/author index	☐	☐	☐	☐	☐
s. geographic location of developers/author index	☐	☐	☐	☐	☐
t. media index	☐	☐	☐	☐	☐
u. product page index	☐	☐	☐	☐	☐

Listed below are a number of suggestions that have been made for revising the Catalog of NIE Education Products. Please use the following scale:

1 = revision is crucial
2 = revision is important but not crucial
3 = revision might be desirable, but probably not important
4 = probably does not need to be revised at all
5 = definitely does not need to be revised
6 = might be undesirable to revise

Enter the number (1 through 6) that represents the importance you personally attach to each revision suggestion.

a.____Instead of two large comprehensive volumes, make separate smaller booklets for each subject area category.

b.____List names and telephone numbers of people in each state who are willing to report on their uses of the products.

c.____Provide information about the total cost for developing each product.

d.____Include quotations from users describing their experiences with the product.

e.____Provide more detailed product evaluation information including the name of a person to contact for a complete evaluation report.

1 = revision is crucial
2 = revision is important but not crucial
3 = revision might be desirable, but probably not important
4 = probably does not need to be revised at all
5 = definitely does not have to be revised
6 = might be undesirable to revise

f.____Use loose-leaf binding so that information about products may be more easily altered by the user.

g.____Improve the graphics. Make the catalog more interesting to look at.

h.____Provide a "cost index" to help users find comparable products which can be purchased within a number of price ranges.

i.____Don't have a book at all. Instead, put all of the information on computer tape for direct access through ERIC or a similar retrieval system.

j.____Have a book, but also have the information available through ERIC or a similar retrieval system.

k.____Exercise some quality control over the accuracy, completeness and objectivity of the developer's statements.

l.____Develop better ways to help users make comparisons among competing products.

m.____Limit descriptions of individual products to two pages.

n.____Edit the catalog to reduce jargon and awkward writing.

o.____Other (please specify) _____

_____

_____

The present cost of the Catalog of NIE Education Products is $22 (10 for Volume I and $12 for Volume II). In any revision of the catalog a sensible price range to aim toward would be

_____ $15 or less

_____ $15 - $20

_____ $20 - $25

_____ $25 - $30

_____ $30 or more

Would you be willing to spend the amount you indicated to purchase a revised catalog for your personal use?

_____ Yes _____ No

Would you be willing to recommend that your organization purchase a copy at the price you indicated?

_____ Yes _____ No

All things considered, how valuable do you consider the catalog?

☐	☐	☐	☐	☐
of no value whatsoever	of little value	somewhat valuable	valuable	extremely valuable

We plan to interview some of the holders of the NIE Catalog. Would you be willing to spend about a half hour on the phone sometime in May or June talking with one of our staff interviewers?

_____ Yes _____ No

(if yes, your name and address please)

Name: _____

Address: _____

_____

Phone: ( ) _____

Best day/hour to call me _____

APPENDIX E

The Comparative Analysis of Approaches to Delivering Interpretations of Educational Research and Development

THE COMPARATIVE ANALYSIS OF APPROACHES TO DELIVERING INTERPRETATIONS OF EDUCATIONAL RESEARCH & DEVELOPMENT

This report is intended to guide an initial consideration of the possible alternative presentations of R&D interpretations. (A separate document, An Experimental Plan to Study Alternate Strategies for Presenting Interpretations of Educational Research and Development, outlines a plan for experimentally studying alternative presentations.) In this paper we have attempted to identify the major forms in which the interpretations could be delivered. For each of these forms or delivery approaches we have summarized the most relevant characteristics. Nine delivery approaches have been identified.

1. A book, report or manual which would be printed and distributed. It would be anticipated that revision would occur no more than once every year or two.
2. A periodic newsletter which could be monthly or bi-monthly.
3. A film which could be distributed, either on a sale or loan basis.
4. A film strip or slide tape presentation.
5. A video-tape of a seminar or workshop where the interpretive information was presented.
6. A seminar or workshop with a fairly standard format so that a number of groups of staff could be trained to conduct it.
7. A telephone answering service or "hot line" which would attempt to provide answers to questions, with fast turn-around a high priority.
8. An individualized workshop which would differ from the standard workshop in that the content and format would be designed in conjunction with a particular client.

9. Consulting services which would involve the assignment of consultants to individual clients much like the NDN system for brokering technical assistance.

The most relevant characteristics of the delivery approaches we examined were: (1) The cost--we looked separately at the start-up or one time costs as well as the continuing costs for each approach. When examining the costs we did not attempt to arrive at a particular dollar amount. This is because even for one approach there can be considerable variation in the cost depending on the amount of research, the quality of the product or service, and other factors. Instead we attempted to make comparative statements about the cost of each approach assuming comparable quality. (2) The staff required. (3) The degree of individualization--the extent to which each presentation is tailored to a particular audience within general audience groupings. For example, while a workshop may be designed for all teachers, a more individualized workshop would be designed for the teachers in a particular school and be tailored more directly to their needs. (4) The dissemination function--the characteristic identifies the dissemination functions provided by each approach. (5) Updating and revision--the ease with which each approach can be modified. (6) The size of audience the approach has the potential for reaching.

Table 1 presents each of the delivery approaches and their respective characteristics. An examination of these characteristics reveals that, in general, approaches with low continuing costs usually require higher start-up costs in order to prepare reusable packages. While the continuing costs for these approaches may be low, the savings could easily be offset by the cost of frequent revisions if they are needed. Also, the more

staff-centered approaches, which tend to have fairly high continuing costs, seem to permit more individualization and are capable of accomplishing more functions. In these cases revision does not add appreciably to the cost. Finally, media and staff-centered approaches tend to reach smaller audiences than print approaches.

Of course, the questions which remain for those selecting from and evaluating these approaches are:

1. Do these approaches have a differential effect on their audience?
2. Does the effectiveness of an approach interact with the type of audience?
3. Does the effect of an approach justify its cost?

Recommendations

Most of the delivery approaches have the potential for reaching only small audiences, but several also have the characteristic of a high degree of individualization. For example, the workshop or seminar reaches a small audience but can be altered to reflect the needs of small groups. The high continuing costs for conducting the workshop could be partially offset by the organizations for whom the workshop is given. Although we recommend the use of workshops as an alternative delivery approach, the costs of development and training, if we were to try to reach large numbers of people, would be high.

Perhaps the most logical delivery approach described is the newsletter. The continuing costs are moderate, and the audience reached is large. These could take the form of "research briefs."

The most exciting delivery approach, and the one which can have the greatest effect on the people it reaches, is the film. In spite of the high development costs, and the need for a supplemental grant if this approach is chosen, we do recommend the film as an alternative delivery approach.

CHARACTERISTICS OF DELIVERY APPROACHES

Delivery Approach	Cost* One Time	Cost* Continuing	Staff Required	Degree of Indiv.	Dissemination Function	Updating and Revision	Potential Size of Audience**
PRINT Book/Report/Manual	Moderate	Low	Consultant Sr. Researcher Research Asst. Writers	Low	Awareness, Knowledge	Moderate	Moderate
Newsletter	Low	Moderate	Consultants Sr. Researcher Research Asst. Writers	Moderate	Awareness, Knowledge	Easy	Large
OTHER MEDIA Film	High	Low	Consultant Sr. Researcher Research Asst. Writers Media Spec.	Low	Awareness	Difficult	Low
Film Strip/Slide Tape	Moderate	Low	Consultant Sr. Researcher Research Asst. Writers Media Spec.	Low	Awareness	Difficult	Low
Video Tape of Seminar/Workshop	Moderate	Low	Consultant Video Tech.	Low	Awareness	Moderate	Low
STAFF CENTERED Traveling Semi-nar/Wkshp	Moderate	High	Consultant Administrator	Moderate	Knowledge, Consideration of Alternatives	Moderate	Low
Phone Service "Hot Line"	Low	High	Consultant Question Ne-gotiator Administrator	High	Knowledge, Consideration of Alternatives	Easy	Low
Indiv. Wkshp/Seminar	Moderate	High	Consultants Administrator	High	Awareness, Knowledge, Consideration of Alterna-tives	Easy	Low
Consultant Referral	Low	High	Consultant Question Ne-gotiator Administrator	High	Entire Range of Functions	Easy	Low

*assuming same size audience
**assuming identical costs